

**AMENDMENTS TO THE SPECIFICATION**

**Please insert the following at page 10 after the second full paragraph and before**

**“Production Example 1”:**

Ball tack is determined by the ball rolling method as provided for in JIS Z 0237 as follows.

**1. Applicable Scope**

This standard specifies the testing methods of pressure-sensitive adhesive tapes and sheets (hereinafter referred to as tapes and sheets) used for packaging, sealing and marking).

**14. Inclined-type ball tack test**

**14.1 Test pieces**

More than four sheets of test pieces with a size of 10 - 15 mm in width and about 300 mm in length need to be prepared. In the case of a stretchy tape or sheet, it is left until it almost returns to its initial length and then it shall be tested.

A test piece shall be cut with a sharp knife while being careful not to damage its edges. The adhesive surface of test section in test piece must not be contaminated with dust. The adhesive surface must not be touched with bare hands or any foreign object.

**14.2 Test equipment**

**14.2.1 Ball rolling tester**

A ball-rolling tester is equipped with an inclined plate having an inclined angle of 20, 30 or 40 degrees. Fig. 7 shows such an example. The individual parts of the tester are shown in this figure.

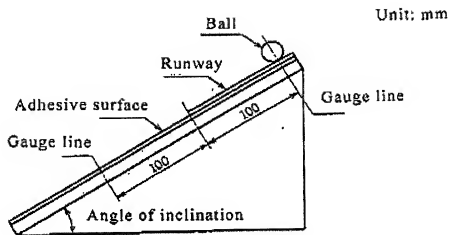


Fig. 7 An example of inclined -type ball tack tester

1)Inclined plate: A flat, smooth and hard plate (glass, metal, wood or plastic plate) can be used for this purpose.

2)Runway: Runway is formed by adhering a transparent film having a length of more than 100 mm and a thickness of 25 $\mu$ m, which is defined in JIS C 2318, on the upper part of the adhesive surface of a test piece. The length of the runway is 100 mm,

3)Measurement portion: Measurement portion is the portion of the adhesive surface having a range of 100 mm from the lower end of the runway.

#### 14.2.2 Balls

1) The material of balls is a high-carbon chromium bearing steel Class 2 (SUJ2) defined in JIS G 4805. The precision is Grade 40 or more of ball-bearing steel defined in JIS B 1501.

2) The sizes of balls are 31 kinds with various sizes ranging from 1/16 to 1 in “ball designation” as defined in JIS B 1501, except for 5/64, 7/64, 9/64, 15/64 and 17/64.

#### 14.3 Testing method

1) A ball-rolling tester is fixed horizontally onto a measurement stand using a level. The standard angle of an inclined plate is 30 degrees. However, it can be tilted to an angle of 20 or 40, according to the necessity.

2) A test piece is set at a designated position on the inclined plate while keeping its adhesive surface upward using pressure-sensitive adhesive tapes to fix the upper and lower ends of the test piece or a sash weight (mass: about 500 g). A polyethylene terephthalate film for a runway is adhered to a designated position on the adhesive surface of the test piece. When the polyethylene terephthalate film is adhered to the adhesive surface, be careful not to include air bubbles or generate any crease. The film must not be pressed with excessive force onto the adhesive surface. When a test piece is set, be careful for it not to lift, crease or bend. In case its edge curled and lifted, that part must be fixed onto the plate with the other pressure-sensitive adhesive tape.

3) The starting position of ball is adjusted to conform with the size of each ball so that the length of the runway becomes constant 100 mm.

4) A ball which is kept in anticorrosive agent is picked up with tweezers, cleaned according to the cleaning method for testing plates described in 10.2.3 3), placed at the starting position and allowed to roll down the plate.

5) A series of these operations - the adjustment of starting position, cleaning of ball and rolling down of ball are repeated for each ball of different size, and the largest ball is found out among the balls that can stop within the measurement position (complete stoppage for more

than 5 seconds). Using the same test piece with which the largest ball was found, the largest ball and two other balls whose size is close to that of the largest one are rolled down the test piece once for each ball in order to confirm that the ball found is the largest one capable of conforming with the measurement standard.

6) The numerical value of 32 times of “ball designation” defined in JIS B 1501 is called as ball number. The test result is expressed by the ball number of the largest ball found, and the average value of three test pieces is calculated as the test result.

Until the largest ball is found, balls can be rolled down a test piece as many times as needed. However, those data are not used.

#### 14.4 Result

The result is recorded as the ball number. The angle of the inclined plate also needs to be recorded.